RESULTS: In spite of the same quality of life score at the first session of chemotherapy (74.5 out of 100), after finishing the chemotherapy cycle, patients in TAC arm had the lower score of QOL (64 in TAC vs. 68 in FAC) and higher range of toxicity and their medical costs were higher as well (the average costs in TAC was 391,176,968.2 Rials vs. 2,427,775.2 in FAC). ICER was negative that showed the dominant result for FAC comparing with TAC. **CONCLUSIONS:** It seems that because of the short horizon of the study, TAC regimen had the worse impact on the patient's quality of life during the chemotherapy cycle because of more side effects than FAC. It is believed that there is need for other studies with longer time horizons and specific attention to the effects of these treatments on survival and quality of life.

PCN89

PROJECTING THE POTENTIAL COST-EFFECTIVENESS OF A BREAST CANCER VACCINE IN COMPARISON TO OTHER STANDARD TREATMENTS: A DECISION ANALYTIC MODEL

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OBJECTIVES: Breast cancer is known to be one of the leading causes of death among the female population. Preventive measures may provide an economic and outcome advantage by reducing treatment costs and increasing survival. The objective of this study was to evaluate the cost-effectiveness of a breast cancer vaccine versus current standard treatments. **METHODS:** TreeAge software was used to calculate the cost-effectiveness. a decision tree was constructed for different probabilities of success and failure for the vaccine versus standard treatment. Costs and outcomes (life-years saved) ranges were obtained from published clinical trials. The vaccine effectiveness was projected from animal studies, with human clinical trials expected within a year. The range of effectiveness of the vaccine was considered between 30% and 90% with a baseline at 80%. The costs included for standard treatments ranged from $20,000 to $45,000 and the cost of the vaccine was assumed at $450 for three doses; therefore, the cost for vaccine ranged from $300 to $2000 depending on the number of doses. The incremental cost-effectiveness ratios were calculated from the range of costs and outcomes. Sensitivity analyses were performed to determine the robustness of the findings. **RESULTS:** Vaccination was found to be a potentially cost-effectiveness option with an ICER of 2384.146 relative to standard treatment. The incremental effectiveness was 8.2 life-years saved. The highest cost-effectiveness of the vaccine was at 90% success and a cost of not more than $1000 per individual. Sensitivity analyses indicated that the vaccine remained cost-effective over the range of model parameters. **CONCLUSIONS:** The breast cancer vaccine was projected to be the most cost-effective treatment option in this analysis. It is expected that better screening for breast cancer vaccine patient candidates will be available in the future.

PCN90

COMPARATIVE RETROSPECTIVE NON-RANDOMIZED PHARMACOECONOMIC TRIAL OF EFFICIENCY AND SAFETY OF USE OF PACLITAXELS (PACLITAXEL-LENS OR TAXOL) IN A MONOMODE FOR 2ND LINE OF TREATMENT OF METASTATIC BREAST CANCER PATIENTS

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OBJECTIVES: For the first time in a modern Russian economic conditions, it has been made pharmacoeconomics trial (PE) uses Russian generic of paclitaxel (Paclitaxel-Lens [PL]) in comparison with original drug (Taxol (T)) at chemotherapy (ChT) in a monomode for 2nd line of metastatic breast cancer (MBC) in real clinical practice. **METHODS:** It has been provided retrospective comparative nonrandomized clinical trial which have been included 70 patients for 35 patients of each group (PL or T) after analysis of 148 case records. **RESULTS:** At the analysis of effectively treatment MBC in group of the patients who have received T, the partial remission (PR, 28.5% against 10%) statistically significantly has been more often reached. At the analysis of safety, it has been shown that in group of the patients who have received PL, statistically significantly has been more often fixed hepatotoxicity (23.3% against 3.8%) and an anemia (19.2% against 3.5%). In group of the patients who have received T, statistically significantly has been more often fixed arthralgia/ myalgia (29.8% against 0%). Total direct costs (DC) in group of patients with T also there were above, than in group of PL, namely $10,727 and $9765 accordingly. Calculation of efficiency of expenses has shown that treatment of MBC by T more expensive and more effective, than treatment by PL. **CONCLUSIONS:** Thus, as a result of research, it has been established that: 1) Applying of T was more (from 7% to 11%) expensive, than PL, but gave the PR is much more often; 2) The alternative scenario and the sensitivity analysis shown to choose conditions when application of compared drugs will be economically more expedient; and 3) Thus, it is necessary to take into consideration, what application of PL was more often accompanied by hepatotoxicity and anemia, like arthralgia/ myalgia after using of T.

PCN91

BEVACIZUMAB + PACLITAXEL + CARBOPLATIN (BEV + PAC + CAR) VS. PEMETREXED + CISPLATIN (PEM + CIS) IN ADENOCARCINOMA NON-SQUAMOUS NON-SMALL CELL LUNG CANCER (NSCLC): A COST-EFFECTIVENESS ANALYSIS FROM A POLISH PUBLIC PAYER'S PERSPECTIVE

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OBJECTIVES: To determine and compare the cost-effectiveness of Bev + Pac + Car versus Pem + Cis regimens in the treatment of patients with adenocarcinoma non-squamous NSCLC from a Polish Public Payer's perspective. **METHODS:** Efficacy and safety of 15 mg of bevacizumab + 200 mg/m^2 of paclitaxel + 6 mg/mL/min of carboplatin versus 500 mg/m^2 of pemetrexed and 75 mg/m^2 of cisplatin was assessed based on a systematic review performed for both therapies according to evidence-based medicine principles. A cost-effectiveness analysis was performed with a lifetime (5 years) horizon and the National Health Fund perspective. a three state (progression-free, progression, death) Markov model was developed. Costs of 1st and 2nd line therapy, administration and monitoring, adverse events treatment, and palliative care were included. Sensitivity analyses testing the influence of length of time horizon, probability of progression, utilities, discounting rates, cisplatin dose, and the length and costs of 2nd line therapy were performed. **RESULTS:** Bev + Pac + Car results in 0.21 life-years gained per patient when compared to Pem + Cis in the treatment of patients with adenocarcinoma non-squamous NSCLC. The additional cost per patient was 18,840 pln (1 EURO = 4.1PLN) over patient's lifetime when Bev + Pac + Car was used instead of Pem + Cis regimen. The incremental cost-effectiveness ratio (ICER) was at an acceptable 91,216 pln. The sensitivity analyses demonstrated that the duration of 2nd line treatment (assumption of 2nd line treatment continuation for more than six cycles) considerably influenced the ICER (1,198 pln). Other sensitivity analyses confirmed the base-case results, proving conclusions' robustness. **CONCLUSIONS:** Based on this modeling analysis, 1st line Bev + Pac + Car therapy is a clinically superior and cost-effective treatment for patients with adenocarcinoma non-squamous NSCLC when compared to chemotherapies such as Pem + Cis.

PCN92

PHARMACOEPIDEMIOLOGICAL AND PHARMACOECONOMIC EVALUATION OF OXALIPLATIN IN PALLIATIVE CHEMOTHERAPY OF METASTATIC COLORECTAL CANCER (MCCR)

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The problem of original drugs substitution on generics presents in the Russian clinical practice due to rational expenditures allocation. Pharmaceutical bioequivalence of generic should be confirmed by therapeutic one. Only after such kind of confirmation, the mentioned substitution could be made in different segments of doctors' practice especially in anticancer chemotherapy. **OBJECTIVES:** To evaluate the clinical-economic interchangeability of the original oxaliplatin Eloxatine (EL) and local generic Exorum (EX) in the chemotherapy of mCCR. **METHODS:** The retrospective clinical-economic analysis of FOLFOX scheme for chemotherapy of mCCR with EL and EX in the real practice has been performed. Fifty case histories (23 with using of EL, 27—EX, was used nomogram of Altman's) were studied. The calculation of direct cost and cost-effectiveness ratio (CER) based on "partial regress + stabilization" parameter no less than 80% has been performed. **RESULTS:** For achievement of equal efficacy EL had less number of chemotherapy cycles and total dosage compared with EX (5,0 and 7,3; 670 mg and 900 mg, respectively). Adverse effects were more frequent in EX versus EL (59 and 38, respectively) and caused additional costs and prolonged hospitalization (9 days/patient compared to EL group). The utilitarian EX program cost per patient was less compared to EL by 7,7%. In the same time, CER calculated with total costs due to side effects treatment was practically equal (difference is 1,6% only). Cost prognosis for equal efficacy results with EL using is less by 28,6% versus EX. The alternative scenario has confirmed the clinical-economic added value of EL. **CONCLUSIONS:** The change of original EL for generic EX in FOLFOX scheme for mCCR has no economic advantages. EL substitution leads to increased number of chemotherapy cycles, higher dose of oxaliplatin, higher rate of adverse effects, and higher costs.

PCN93

COST-MINIMIZATION ANALYSIS OF XELOX (CAPECITABINE + OXALIPLATIN) VERSUS FOLFOX-4 (5-FU/LV + OXALIPLATIN) AS ADJUVANT TREATMENT IN STAGE III COLON CANCER UNDER THE BRAZILIAN PRIVATE PAYER PERSPECTIVE

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BACKGROUND: Colorectal cancer is the third leading cancer worldwide (INCA) with nearly 1.2 million cases and about 630,000 deaths expected in 2007 (ACS 2007). In Brazil, it is estimated 28,110 new cases in 2010 (INCA 2010). For patients with stage III colon cancer, the benefits from fluorouracil (5-FU)-based adjuvant chemo-

therapy are well established and the combination regimens including a fluoropyrimidine + oxaliplatin are the current standard of care. **OBJECTIVES:** To compare costs of XELOX with FOLFOX-4 as adjuvant treatment for stage III colon cancer under Brazilian private payer perspective. **METHODS:** Both regimens demonstrated to significantly improve disease-free survival when compared to 5-FU/LV for adjuvant treatment of stage III colon cancer (MOSAIC and XELOXA trials). In the absence of head-to-head trials comparing both regimens, an indirect comparison using Butcher approach (Butcher 1997) was conducted. No difference was found regarding efficacy of regimens (XELOX vs. FOLFOX-4 in disease-free survival: HR 1.03, 95% CI 0.81, 1.29); therefore, a cost-minimization analysis was used. a modified Delphi panel identified local practices to manage severe adverse events (SAEs) of each scheme. Only direct costs were considered for a patient with 1.7 m^2. Drug prices were obtained from official public sources (Kairos Magazine, April 2010) and administration costs from medical society physicians fee list (CBHPM2008, v.5). Time horizon was 6 months according to clinical recommendations: eight cycles for XELOX and 12 for FOLFOX-4. Discounting was not applied. **RESULTS:** XELOX is less costly than FOLFOX-4 ($Brz49,862 vs. $Brz57,846). XELOX has higher acquisition costs which is offset by savings in medical resource utilization. Mean acquisition costs for XELOX were R$4185 higher than with FOLFOX-4, but costs to treat SAEs and administration costs were $Brz12,169 higher for FOLFOX-4. One-way sensitivity analysis confirmed the robustness of results. **CONCLUSIONS:** Findings suggest XELOX as a cost-saving therapy for the adjuvant setting under the private payer perspective in Brazil when compared to FOLFOX-4.

PCN94

CAPECITABINE + OXALIPLATIN (XELOX) VS. 5-FU/LV + OXALIPLATIN (FOLFOX4) IN THE ADJUVANT TREATMENT OF PATIENTS WITH COLON CANCER (ACC): COMPARISON OF DIRECT MEDICAL AND SOCIETAL (INDIRECT) COSTS

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OBJECTIVES: FOLFOX4 has been the chemotherapy of choice for patients with stage III colon cancer. Recently, the international NO16968 study reported results confirming the efficacy of XELOX in this setting, and evidence suggests that both regimens have at least equivalent efficacy. Therefore, medical and societal resource utilization are important factors for providers, patients, and payers. The objective of this analysis was to compare total costs required to treat an average aCC patient with either XELOX or FOLFOX4 in Switzerland. **METHODS:** In the absence of a direct comparison, detailed medical resource utilization (MRU) data collected for XELOX from study NO16,968 (aCC) and for FOLFOX4 from study NO16,966 (metastatic colorectal cancer) were analyzed. The FOLFOX4 regimens are identical in both indications; therefore, MRU data from NO16,966 were considered valid proxies. In addition to direct MRU (chemotherapy, hospitalizations due to adverse events [AEs], ambulatory encounters, AE medication, and central venous access [CVA] placements), patient time and travel costs for hospitalizations, ambulatory encounters, and drug administration were estimated. Unit costs were derived from official tariffs (Spezialitätenliste, Tarmed 2010 for drug costs and physician services), official statistics (hospital cost, mean hourly salary) and tax guidelines (travel costs). Total costs while on treatment (24 weeks) for an average patient with aCC were compared. **RESULTS:** On average, XELOX saved CHF 11,471 per patient versus FOLFOX4. CHF 8883 resulted from savings in direct costs, mainly driven by savings in drug administration (CHF 9312) and CVA placements (CHF 1730). Savings in patient time and travel costs amounted to CHF 2588. **CONCLUSIONS:** XELOX appears to be cost-saving versus FOLFOX4 in aCC from both a Swiss health-care system and the societal perspective, assuming equivalent efficacy for the two regimens. Considering the high incidence of colon cancer in Switzerland, substantial overall savings may be realized by routine use of XELOX in this indication.

PCN95

A MARKOV MODEL TO ESTIMATE THE COST-EFFECTIVENESS OF OMACETAXINE IN CHRONIC MYELOID LEUKEMIA

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OBJECTIVES: In patients with chronic myeloid leukemia (CML), first-line treatment with imatinib therapy is beneficial. In cases of imatinib failure, second-generation tyrosine kinase inhibitors (TKIs) are recommended. Omacetaxine has a novel mode of action and acts independently of TKIs; thus, it may have therapeutic advantages for patients who have developed resistance to TKI therapy and have no available treatment options. The objective was to develop a health economic model to estimate the cost-effectiveness of omacetaxine in the treatment of CML. **METHODS:** A cost-utility Markov model was developed to capture the progression of CML and treatment effects. The model was developed from the perspective of the French health-care system. Patients entered the model treated either with omacetaxine or standard care, in one of three phases: chronic, accelerated, or blast phase, having failed on imatinib therapy (through resistance or intolerance). Patients then moved to states of response, no response, or death. Survival estimates for nonresponding and responding patients were taken from studies 202 and 203. These were extrapolated using parametric curve fits to estimate survival beyond the end of the trial. Resource use was based on the trial and from the expert opinion of a panel of French clinicians. Unit costs and utilities were elicited from the literature. One-way and probabilistic sensitivity analyses (PSA) were performed. **RESULTS:** The deterministic results demonstrated that treatment with omacetaxine is cost-effective at a threshold of €30,000. Sensitivity analysis showed that results were most sensitive to cost of omacetaxine, utility score, and survival benefit. PSA results showed that the model was sufficiently robust to parameter uncertainty. **CONCLUSIONS:** The analysis demonstrated that omacetaxine is cost-effective in the treatment of CML patients who are resistant to TKI therapy and have no available treatment options.

PCN96

A UK COST-UTILITY ANALYSIS OF PACLITAXEL ALBUMIN COMPARED TO SOLVENT-BASED PACLITAXEL MONOTHERAPY AND DOCETAXEL MONOTHERAPY FOR PRETREATED METASTATIC BREAST CANCER (MBC)

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OBJECTIVES: Paclitaxel albumin (P-A, Abraxane®) is nanoparticle albumin-bound paclitaxel formulated without use of irritant solvents that are responsible for many of the hypersensitivity and dose-limiting adverse events (AEs). Previous research has compared its cost-effectiveness to solvent-based paclitaxel (S-P) and docetaxel (DOC) in a cohort of patients with mixed treatment history. This study examined P-A's cost-effectiveness for pretreated MBC, the population specified in the European license. **METHODS:** A Markov model with progression-free, progressed, and mortality states was developed to estimate costs and outcomes over 5 years from a UK NHS perspective. Included from published sources were the costs at 2009 prices of drugs, administration, AEs, and supportive care. Published utility weights were applied to health states to estimate the impact of response, disease progression, and AEs on quality-adjusted life-years (QALYs). Clinical data for pretreated patients receiving P-A 260 mg/m^2 3-weekly (q3w) and S-P 175 mg/m^2 q3w were from Gradishar (2005). Using Bucher's methods, an indirect comparison with Jones (2005) provided estimates of clinical parameters for DOC 100 mg/m^2 q3w. Weibull extrapolations of survival data generated transition probabilities. **RESULTS:** Compared to S-P, P-A achieved an extra 0.164 QALYs, 0.263 life-years, and incurred additional costs of £4,137 per patient treated. This translated to an incremental cost-effectiveness ratio of £25,209/QALY. P-A saved £697 when compared to DOC, with a marginal QALY gain of 0.0037 and no life-expectancy divergence. Probabilistic sensitivity analysis versus DOC indicated a 61% likelihood of P-A satisfying a willingness-to-pay threshold of £30,000/QALY. Both comparisons were sensitive to drug costs and survival estimates. Accounting for potential drug wastage did not influence interpretation of results from either comparison. **CONCLUSIONS:** The model found that P-A gave better outcomes than S-P or DOC and was cost-effective compared to both interventions. This depended upon greater efficacy than S-P and a more favorable safety profile than DOC.

PCN97

A COST-UTILITY ANALYSIS ON THE USE OF TRASTUZUMAB + ANASTROZOLE COMPARED TO LAPATINIB + LETROZOLE, LETROZOLE MONOTHERAPY OR ANASTROZOLE MONOTHERAPY IN THE TREATMENT OF HER2+/HORMONE RECEPTOR POSITIVE (HR+) METASTATIC BREAST CANCER (MBC) FROM THE PERSPECTIVE OF THE UK NATIONAL HEALTH SERVICE (NHS)

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OBJECTIVES: To assess the cost-effectiveness of trastuzumab/anastrozole compared to lapatinib/letrozole, anastrazole, and letrozole for the treatment of HER2+/HR+ mBC patients in whom treatment with an aromatase inhibitor is suitable from a UK NHS perspective. **METHODS:** An area under the curve model based on the TAnDEM (trastuzumab/anastrozole vs. anastrozole) and EGF30008 (lapatinib/letrozole vs. letrozole) RCTs and the findings of a mixed treatment comparison (MTC) conducted on endocrine treatments in HR+ mBC was developed in Excel. a rank preserving structural failure time (RPSFT) model was utilized to account for the 70% crossover in TAnDEM. In the base-case, no attempt to account for the sizeable additional imbalance in 2nd line chemotherapy was made. The anastrozole PFS and RPSFT-adjusted OS curves from TAnDEM were utilized as a baseline from which to implement the required indirect comparisons under the assumption of an AI "class effect" (as suggested by expert clinical opinion and confirmed by the MTC). The present value of all costs and health outcomes attributable to each treatment option were calculated and the efficiency frontier defined. Extensive deterministic and probabilistic sensitivity analyses were conducted. **RESULTS:** Anastrozole is dominated by letrozole. Lapatinib/letrozole is extendedly dominated by a combination of letrozole monotherapy and trastuzumab/anastrozole. Trastuzumab/anastrozole produced the most QALYs of all regimens. Trastuzumab/anastrozole and letrozole define the efficiency frontier with a base-case ICER of £54,336/QALY. The use of the utility values derived from EGF30008 caused this ICER to fall to £44,497/QALY. **CONCLUSIONS:** Lapatinib/letrozole is not a cost-effective use of finite NHS resources at any cost-effectiveness threshold. As no attempt was made to account for the imbalance of 2nd line chemotherapy in TAnDEM (31% in anastrozole vs. 8% for trastuzumab/anastrozole) and relatively conservative utility values were used within the model the base-case ICER of trastuzumab/anastrozole vs. letrozole (£54,336/QALY) should be regarded as conservative and the true ICER likely lies below £50,000/QALY gained.